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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,976	06/30/2006	Bud T.J. Johnson	1063958	3592
59154 7590 10/02/2008 OSLER, HOSKIN & HARCOURT LLP (OTHER) 1000 DE LA GAUCHETIERE STREET WEST SUITE 2100 MONTREAL, QC H3B-4W5 CANADA				
EXAMINER				
KERSHETYN, IGOR				
ART UNIT		PAPER NUMBER		
3745				
NOTIFICATION DATE		DELIVERY MODE		
10/02/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmtl@OSLER.COM

Office Action Summary

Application No.

10/596,976

Applicant(s)

JOHNSON, BUD T.J.

Examiner

Igor Kershteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-28 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-893)
Paper No(s)/Mail Date 08/01/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 9, 10, 19, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Francis (4,424,452).

In figures 2 and 3, Francis teaches a fluid turbine, comprising: a rotor and blade assembly, including: a rotor 12, the rotor being rotatable about a rotation axis; a plurality of blades 22,23,24, each of the blades having a tip (not numbered), the blade tips

defining a blade tip radius with respect to the rotation axis; a fluid displacement head 25 arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips, the fluid displacement head arrangement shaped to redirect blocked-off fluid towards the blades extending radially beyond a blocked-off area.

Claims 9-11, 14, 16-19, 21, 22, 24, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Orlov et al. (6,382,904).

In figures 2-4, Orlov et al. teach a fluid turbine, comprising: a rotor and blade assembly 1, including: a rotor (not numbered), the rotor being rotatable about a rotation axis; a plurality of blades (inherently), each of the blades having a tip (inherently), the blade tips defining a blade tip radius with respect to the rotation axis; a fluid displacement head 14 arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips, the fluid displacement head arrangement shaped to redirect blocked-off fluid towards the blades extending radially beyond a blocked-off area.

Claims 9-11, 18, 19, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Richter (7,214,029).

In figures 1-13, Richter teaches a fluid turbine 30, comprising: a rotor and blade assembly 60, including: a rotor, the rotor being rotatable about a rotation axis; a plurality of blades 70, each of the blades having a tip (not numbered), the blade tips defining a blade tip radius with respect to the rotation axis; a fluid displacement head arrangement

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42 blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips, the fluid displacement head arrangement shaped to redirect blocked-off fluid towards the blades extending radially beyond a blocked-off area.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Francis (4,424,452) in view of Karlsson et al. (4,320,304).

Francis teaches all the claimed subject matter except that he doesn't teach the interior surface of the encasement assembly has a fluid velocity increasing surface forward of the blades, the fluid velocity increasing surface being shaped to increase the velocity of fluid entering the turbine, the fluid velocity increasing surface is S-shaped, the interior surface of the encasement assembly has an expanding exhaust channel surface rearward of the blades, the interior surface of the encasement assembly has an expanding exhaust channel surface rearward of the blades, the exterior surface of the encasement assembly is shaped to form an airfoil to provide converging airflow for augmenting exhaust from the turbine, the exterior surface of the encasement assembly is shaped to form an airfoil to provide converging airflow for augmenting exhaust from the turbine.

Karlsson et al., in figures 6 and 7, teaches a fluid turbine having a rotor 10 having a plurality of blades, a fluid head (not numbered), and an encasement assembly 1,2 the interior surface of the encasement assembly has a fluid velocity increasing surface (not numbered) forward of the blades, the fluid velocity increasing surface being shaped to increase the velocity of fluid entering the turbine, the fluid velocity increasing surface is S-shaped, the interior surface of the encasement assembly has an expanding exhaust channel surface rearward of the blades, the interior surface of the encasement assembly has an expanding exhaust channel surface rearward of the blades, the exterior surface of the encasement assembly is shaped to form an airfoil to provide converging airflow for augmenting exhaust from the turbine, the exterior surface of the encasement assembly is shaped to form an airfoil to provide converging airflow for augmenting exhaust from the turbine.

Since Francis and Karlsson et al. are analogous art because they are from the same field of endeavor, that is the fluid turbine art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the flow through encasement assembly surrounding the rotor and blade assembly of Francis with the interior surface of the encasement assembly has a fluid velocity increasing surface forward of the blades, the fluid velocity increasing surface being shaped to increase the velocity of fluid entering the turbine, the fluid velocity increasing surface is S-shaped, the interior surface of the encasement assembly has an expanding exhaust channel surface rearward of the blades, the interior surface of the encasement assembly has an expanding exhaust channel surface rearward of the blades, the

exterior surface of the encasement assembly is shaped to form an airfoil to provide converging airflow for augmenting exhaust from the turbine, the exterior surface of the encasement assembly is shaped to form an airfoil to provide converging airflow for augmenting exhaust from the turbine as taught by Karlsson et al. for the purpose of improving the overall efficiency.

Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Francis (4,424,452) in view of Rabinow (2,973,041).

Francis teaches all the claimed subject matter except that he doesn't teach the each of the blades has a controllable blade pitch.

Rabinow, in figures 1-3, teaches a windmill 10 having blades 14, and a fluid displacement head 13, each of the blades 13 has a controllable blade pitch.

Since Francis and Rabinow are analogous art because they are from the same field of endeavor, that is the fluid turbine art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fluid turbine of Francis with each of the blades having a controllable blade pitch as taught by Rabinow for the purpose of varying the pitch of the blades in accordance with variations in rotational speed.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of five patents.

Hoadley (2,650,752) is cited to show a rotor and blade assembly, including: a rotor, the rotor being rotatable about a rotation axis; a plurality of blades, each of the blades having a tip, the blade tips defining a blade tip radius with respect to the rotation axis; a fluid displacement head arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips, the fluid displacement head arrangement shaped to redirect blocked-off fluid towards the blades extending radially beyond a blocked-off area.

Goede (2,664,961) is cited to show a rotor and blade assembly, including: a rotor, the rotor being rotatable about a rotation axis; a plurality of blades, each of the blades having a tip, the blade tips defining a blade tip radius with respect to the rotation axis; a fluid displacement head arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips, the fluid displacement head arrangement shaped to redirect blocked-off fluid towards the blades extending radially beyond a blocked-off area.

Crompton (3,339,078) is cited to show a rotor and blade assembly, including: a rotor, the rotor being rotatable about a rotation axis; a plurality of blades, each of the blades having a tip, the blade tips defining a blade tip radius with respect to the rotation axis; and a fluid displacement head arrangement but fails to teach the head

arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips.

Currah (4,411,588) is cited to show a rotor and blade assembly, including: a rotor, the rotor being rotatable about a rotation axis; a plurality of blades, each of the blades having a tip, the blade tips defining a blade tip radius with respect to the rotation axis; a fluid displacement head arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips, the fluid displacement head arrangement shaped to redirect blocked-off fluid towards the blades extending radially beyond a blocked-off area.

Hesh (4,868,408) is cited to show a rotor and blade assembly, including: a rotor, the rotor being rotatable about a rotation axis; a plurality of blades, each of the blades having a tip, the blade tips defining a blade tip radius with respect to the rotation axis; and a fluid displacement head arrangement but fails to teach the head arrangement blocking off at least 50% of the blade tip radius from the rotation axis towards the blade tips.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

/Igor Kershteyn/
Primary Examiner, Art Unit 3745